(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 February 2005 (03.02.2005)

PCT

(10) International Publication Number
WO 2005/010060 A1

(51) International Patent Classification[7]: C08F 20/18, C07C 67/14, 69/54, G02B 6/00, C07B 59/00

(21) International Application Number: PCT/JP2004/010868

(22) International Filing Date: 23 July 2004 (23.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-278950 24 July 2003 (24.07.2003) JP

(71) Applicants *(for all designated States except US)*: **FUJI PHOTO FILM CO., LTD.** [JP/JP]; 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). **WAKO PURE CHEMICAL INDUSTRIES, LTD.** [JP/JP]; 1-2, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 5408605 (JP).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SASAKI, Hiroki** [JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). **YAMADA, Kohzaburoh** [JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). **MAESAWA, Tsuneaki** [JP/JP]; c/o Wako Pure Chemical Industries, Ltd., Chemical Products Research Laboratories, 1633, Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP). **ITO, Nobuhiro** [JP/JP]; c/o Wako Pure Chemical Industries, Ltd., Chemical Products Research Laboratories, 1633, Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP). **MUTO, Kazushige** [JP/JP]; c/o Wako Pure Chemical Industries, Ltd., Chemical Products Research Laboratories, 1633, Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP).

(74) Agent: **SIKS & CO.**; 8th Floor, Kyobashi-Nisshoku Bldg., 8-7, Kyobashi 1-chome, Chuo-ku, Tokyo 1040031 (JP).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

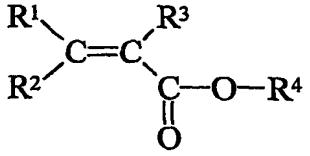
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/010060 A1

(54) Title: HEAVY-HYDROGENATED (METH)ACRYLATES, PROCESS FOR PRODUCING THEM, POLYMERS THEREOF AND OPTICAL MEMBERS



[1]

(57) Abstract: A novel compound represented by a formula [1] wherein R^1 and R^2respectively represent a heavy or light hydrogen atom, R^3 represents a heavy or light hydrogen atom or a methyl group in which three hydrogen atoms are respectively heavy or light hydrogen atoms, R^4 represents a condensed ring group composed of a norbornane ring and a C_{5-7} hydrocarbon ring provided that at least one hydrogen atom contained in the condensed ring group is a heavy hydrogen atom; and a novel polymer produced by polymerization of a composition comprising the compound are disclosed.